

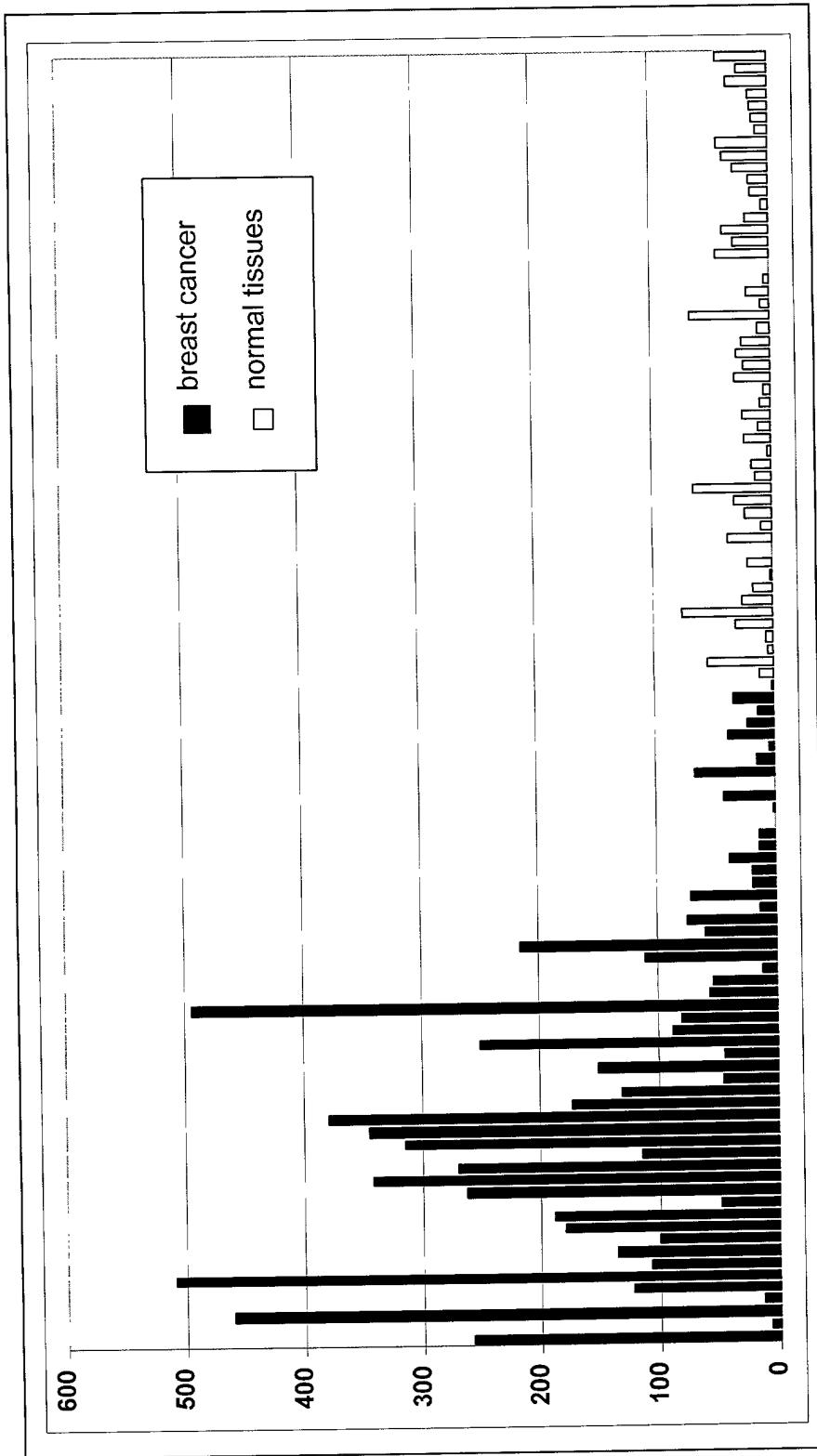
# FIGURE 1

GGCGTCCGCGCACACCTCCCCCGCCGCCACCGCCGCACCTCCGCCCTCTGCCCGCAACCGCT  
GAGCCATCCATGGGGTCGCGGCCAACCGTCCCAGGGCGCTGGCGGTGCTGCTGCTGCTGCT  
GCTGCCGCAACTGCTGCTGCTGGCGGGGGCGTCCCAGGGCGGTGCGCAGGGCGCAGGAGG  
ATGTAGATGAGTGTGCCAAGGGCTAGATGACTGCGCATGCCACGCCCTGTGTCAGAACACACCCACCTCC  
TACAAGTGCTCTGCAAGCCTGGCTACCAAGGGAAAGGCAAGGCAAGGAGTGTGAGGACATCGATGAATGTGGAAA  
TGAGCTCAATGGAGGCTGTCCATGACTGTTGAATATTCCAGGCAATTATCGTTGCACTTGTGTTGATG  
GCTTCATGTTGGCTCATGACGGTCATAATTGTCATGTTGAGTGGACAGTGCTGGAGAACAAATGGCGGCTGC  
CAGCATACTGTGTCAACGTCATGGGAGCTATGAGTGCTGCAAGGAGGGGTTTCCTGAGTGACAA  
TCAGCACACCTGCATTACCGCTCGGAAGAGGGCTGAGCTGCAATAAGGATCACGGCTGTAGTCACA  
TCTGCAAGGAGGCCAACAGGGCAGCGTGCCTGTGAGTGCAAGGCCCTGGTTGAGCTGGCAAGAACACCAG  
AGAGACTGCATCTTGACCTGTAACCATGGGAACGGTGGGTGCCAGCACTCCTGTGACGATAAGGCCGATGG  
CCCAGAGTGCAGCTGCCATCCACAGTACAAGATGCACACAGATGGGAGGAGCTGCCCTGAGCGAGAGGACA  
CTGTCCTGGAGGTGACAGAGAGAACACCATCAGTGGTGGATGGGATAAACGGGTAAACGGCGCTG  
CTCATGGAAACCTGTGCTGCAACAATGGAGGCTGTGACCCACCTGTAAGGATACTTCGACAGGTGTC  
CTGCAGTTGTCCTGTTGGATTCACTCTCAGTTGGATGGGAAGACATGTAAGGATATTGATGAGTGCCAGA  
CCCAGCAATGGAGGTGATCATTCTGCAAAAACATCGTGGCAGTTTGACTGCGGCTGCAAGAAAGGA  
TTTAAATTATTAACAGATGAGAAGTCTGCAAGATGTGGATGAGTGCTCTTGATGAGGACCTGTGACCA  
CAGCTGCATCAACCACCCCTGGCACATTGCTTGCAACCGAGGGTACACCCCTGTATGGCTTCA  
ACTGTGGAGACACCAATGAGTGCAGCATCAACAAACGGAGGTGTCAGCAGGTCTGTGTAACACAGTGG  
AGCTATGAATGCCAGTGCAACCCCTGGTACAAGCTCCTGAGTGGAAATAAAAAGACTGTGTAAGTGAAGGG  
GCTCCTGCCACAAGTGTGTCACCCCTGTGTCCTGCACTGCCAGTGGTAAGGTTGGAGGAGACGGGTG  
TCCTCAGATGTCACTCTGCATTCACTCTTCAAGATGTCACCCATCAGGACAAGTGTAACTTIA  
CTAAATGAAGGCAAGTGTAGTTGAAAAATGCTGAGCTGTTCCCGAGGGTCTGCGACCAGCACTACCA  
GAAGCACAGCTCAGTAAAAGAGAGCTCCGCTACGTAACCTTACATGCAGCTTGGCAAGCAAGTCCCAG  
GAGCCCTGGCCACCAAGCACCCCTAAGGAAATGTTTACACTGTTGAGTTGAGCTGAAACTAACCAA  
AAGGAGGTGACAGCTTGTGACCTGAGCTGCACTGTAAGCGAACCGAGAACGGCTCCGAAAGCCAT  
CCGCACGCTCAGAAAGGCCGTCACAGGGAGCAGTTCACCTCCAGCTCTCAGGCATGAACCTCGACGTGG  
CTAAAAGCCTCCCAGAACATCTGAAAGCCAGGGCAGACTCTGTGGAGTGGCCAGGGTCATGCAGAAAAC  
CAATGTGTCAGTTGCAAGGCTGGGACCTATTATGATGGAGCACGAGAACGCTGCACTTTATGTCCA  
AACCTCCAAAATGAGGAAGGACAAATGACTGTGAAACCATGCCAAGACCAGGAAATTCTGGGCC  
AGACCCCCAGAAGCTTGAATATGTCGAATGTGGAGGTCTGTGCAACCTGGTGAATATTCTGCAGATGG  
TTTGACCTTGGCAGCTCTGTGCCCTGGGACGTTCCAGCCTGAAGCTGGTCAACTTCTGCTTCCCTG  
TGGAGGAGGCCCTGCCACAAACATCAGGGAGCTACTTCCTTCAAGGACTGTGAAACCAGAGTTCAATGTT  
CACCTGGACATTCTACAACACCACACTCACCAGATGATTGTTGCCAGTGGGAACATACCAGCCTGAA  
TTTGGAAAAATAATTGTTCTGCCCAGGAATAACTACGACTGACTTTGATGGCTCCAAACATAAC  
CCAGTGTAAAACAGAAGATGTGGAGGGGAGCTGGAGATTCACTGGGTACATTGAATCCCCAAACTACC  
CAGGAATTACCCAGCCAACACCGAGTGTACGGACCATCAACCCACCCCCAACGGCCGATCCTGATC  
GTGGTCCCTGAGATCTTCTGCCATAGAGGACACTGTGGGACTATCTGGTGTGCGAAAACCTTCA  
ATCCAATTCTGACAACATATGAAACCTGCCAGACACTAGAACGCCCATCGCCTCACCTCCAGGTCAA  
AGAAGCTGAGGATTCAAGTCCAATGAAAGGGAACAGCGCTAGAGGGTTCCAGGTCCCATACGTGACA  
TATGATGAGGACTACCAGGAACACTATTGAAGACATAGTTGAGATGGCAGGCTTATGCACTGAGAACCA  
TCAGGAAATACTTAAGGATAAGAAACTTATCAAGGCTCTGTTGATGTCCTGGCCATCCCCAGAACATT  
TCAAGTACACAGCCCAGGAGTCCCAGAGATGTTCCAAGATGTTCACTGCCATCCGATTGCTACGTTCAA  
TCCAGGTTTGAGACCTACAAATGACTCAGGCCACGTGCCACTCAAAATGTTCTGCTATAGGGTT  
GGTGGGACAGAGCTGTCTCTCTGATGTCAAGCAGTCAGTGGGTATTGCTGCCCTCCGTATCAGTGACTC  
ATTAGAGTTCAATTGTTAGATAATACAGATATTGGTAAATTGAACATTGGTTTCTTCCAGCATC  
GTGGATGTAGACTGAGAACGGCTTGAGTGGCATCAGCTCTCACTGCTGTGGGCGGATGTTGGATAGA  
TCACGGGCTGGCTGAGCTGGACTTTGGTCAGCTAGGTGAGACTCACCTGCTCTGGGTCTTACTCCT  
CCTCAAGGAGCTGTAGTGGAAAGGAGGCCACAGAACAGTGTCTTATTCTGAAACTTCAGCTCCTCTAG  
CCCGGCCCTCTAAGGGAGCCCTGCACACTCGTGTGCAAGGCTCTGAGCAGGCAAGAACAGGCAAGAGGG  
GGGAAGGAGACCCCTGCAGGCTCCCTCCACCCACCTTGAGACCTGGGAGGACTCAGTTCTCCACAGCCTT  
CTCCAGCCTGTGTGATACAAGTTGATCCAGGAACCTGAGTTCAAGCAGTGCTCGTGA  
AGAAAGAATTAGAAATAAAACTAACGACTTCTGGAGACAT

# FIGURE 2

MGVAGRNRPGAAWAVLLLLLPPPLLLAGAVPPGRGRAAGPQEDVDECAQGLDDCHADALCQNTPTSYKC  
SCKPGYQGEGRQCEDIDECNGNELNCGCVHDCLNI PGNYRCTCFDGFMLAHGHNCLDVDECLENNGGCQHT  
CVNVMGSYECCCKEGFFLSDNQHTCIHRSEEGLSCMNKDHCNSHICKEAPRGSVACECRPGFELAKNQRDC  
ILTCNHGNGGCOHSCDDTADGPECSCHPQYKMHTDGRSCLEREDTVLEVTESENNTSVDGDKRVKRRLLME  
TCAVNNNGGCDRTCKDTSTGVHCSCPVGFTLQLDGKTCKDIDECQTRNGGCDHFCKNIVGSFDGCKKGFKL  
LTDEKSCQDVDECSDLRTCDHSCINHPGTACACNRGYTLYGFTHCGDTNECSINNGGCQQVCVNTVGSYE  
CQCHPGYKLHWNKKDCVEVKGLLPTSVPRVSLHCGKSGGDGCFLRCHSGIHLSSDVTIIRTSVTFKLINE  
GKCSLKNAELFPFGLRPALPEKHSSVKEFRYVNLTCSGGKQVPGAPGRPSTPKEMFITVEFELETNQKEV  
TASCDLSCIVKRTEKRLRAIRTLRAVHREQFHLQLSGMNLDVAKKPPRTSERQAESCGVGQGHAENQCV  
SCRAGTYYDGARERCILCPNGTFQNEEGQMTCEPCPRPGNSGALKTPPEAWNMSSECGLCQPGEYSADGFAP  
CQLCALGTFQPEAGRSTSCPCCGGGLATKHQGATSFQDCETRVQCSPGHFYNTTHRCIRCPVGTYQPEFGK  
NNCVSPGNTTDFDGSTMITQCKNRRCGGELGFTGYIESPNYPGNYPANTECTWTINPPPKRRLIVVP  
EIFLPIEDDCGDLVMRKTSSNSVTYETCQTYERPIAFTRS SKLWIQFKSNEGNSARGFQVPYVTYDE  
DYQELIEDIVRDGRLYASENHQEILDKKLKALFDVLAHPQNYFKYTAQESREMFPRTS FIRLLRSKVSRF  
LRPYK

### FIGURE 3



# FIGURE 4A

BCO2_human	MGVAGRNRPGAAWAVL <del>LLLLL</del> PP <del>LLL</del> LAGAVPPGRGRAAGPQEDVDECAQGLDDCHADA
BCO2_mouse	MGVAGCGRPREARALL <del>LLL</del> PP--LLAAVPPDRGLTNGPSEDVDECAQGLDDCHADA ***** . * * :***** * . * ; * . *****
BCO2_human	LCQNTPTSYKCSCPKGQGEGRQCEDI <del>E</del> CGNELNGGCVHDCLNI PGNYRCTCFDGFMLA
BCO2_mouse	LCQNTPTSYKCSCPKGQGEGRQCEDI <del>E</del> CGNELNGGCVHDCLNI PGNYRCTCFDGFMLA ***** :***** ; * . * *****
BCO2_human	HDGHNCLDVDECLENNGGQC <del>H</del> TCVNVMGSYECCCKEGFFLSDNQHTCIHRSEEGLSCMNK
BCO2_mouse	HDGHNCLDMDECLENNGGQC <del>H</del> IC <del>T</del> NVIGSYE <del>C</del> RCKEGFFLSDNQHTCIHRSEEGLSCMNK ***** :***** ; * . * *****
BCO2_human	DHGCSHICKEAPRGSVACECRPGFELAKNQRDCILTCNHNGGCQHS <del>C</del> DDTADGPECSCH
BCO2_mouse	DHGCGHICKEAPRGSVACECRPGFELAKNQKDCILTCNHNGGCQHS <del>C</del> DDTADGPECSCH ***** :***** ;***** ;***** ;***** ;*****
BCO2_human	PQYKMHTDGRSCLEREDTVLEVTE <del>S</del> VVDGDKR <del>V</del> KR <del>V</del> LLMETCAVNNGCDRTCKDT
BCO2_mouse	PRYRLHADGRSCL <del>E</del> QEGTVLEGTESNATSVADGDKR <del>V</del> KR <del>V</del> LLMETCAVNNGCDRTCKDT *: : : :***** ; * . * *** : * . *****
BCO2_human	STGVHCSCPVGFTLQLDGKTC <del>D</del> I <del>E</del> CQTRNGGCDHFCKNIVGSFD <del>G</del> C <del>K</del> GF <del>K</del> L <del>L</del> DEK
BCO2_mouse	STGVHCSCPVGFTLQLDGKTC <del>D</del> I <del>E</del> CQTRNGGCDHFCKNIVGSFD <del>G</del> C <del>K</del> GF <del>K</del> L <del>L</del> DEK ***** :***** ;***** ;***** ;***** ;*****
BCO2_human	SCQDVDEC <del>S</del> LDRTCDH <del>S</del> INHPGT <del>F</del> ACACNRGYTLYGFT <del>H</del> CGDTNECSINNGGCQQVCVN
BCO2_mouse	SCQDVDEC <del>S</del> LDRTCDH <del>S</del> INHPGT <del>F</del> ACACNRGYTLYGFT <del>H</del> CGDTNECSINNGGCQQVCVN ***** :***** ;***** ;***** ;***** ;***** ;*****
BCO2_human	TVGSYECQCHPGYKLHWNKKDCVEVKG <del>L</del> PTSV <del>P</del> RSV <del>L</del> HCGKSGGDGCFLRC <del>H</del> SGIHL
BCO2_mouse	TVGSYECQCHPGFKLHWNKKDCVEVKG <del>F</del> PP <del>T</del> SP <del>M</del> RSV <del>L</del> HCGKSGGDRCFLRC <del>R</del> SGIHL ***** :***** ;***** ;***** ;***** ;***** ;*****
BCO2_human	SSDVTTIRTSVTFKLNEGKCSLNAELFPEGLRPALPEKHSSV <del>K</del> ESFRYVNLTCSSGKQV
BCO2_mouse	SSDVVTVRTSVTFKLNEGKCSLQAKLSP <del>E</del> GLRPALPERHSSV <del>K</del> ESFQYANLT <del>C</del> SPGKQV **** . * :***** ; * : * ***** ;***** ;*, **** . ****
BCO2_human	PGAPGRPSTPKEMFITVEFELETNQKEVTASCDLSCIVKR <del>T</del> EKRLKA <del>I</del> RTL <del>R</del> KA <del>V</del> HREQ
BCO2_mouse	PGALGRLNAPKEMFITVEFERETYEKEVTASCNLSCVV <del>T</del> EKRLKA <del>I</del> RTL <del>R</del> KA <del>A</del> HREQ *** * . :***** ; * : * :***** ;***** ;***** ;***** ;*****
BCO2_human	FHLQLSGMNL <del>D</del> VAKKPPRTSERQA <del>E</del> CGVGQGHAENQCV <del>S</del> CRA <del>G</del> TYYDGA <del>R</del> ERC <del>I</del> LC <del>P</del> NG
BCO2_mouse	FHLQLSGMNL <del>D</del> MAKTPSRVSGQHEETCGVGQGHEESQCV <del>S</del> CRA <del>G</del> TYYDGSQERC <del>I</del> LC <del>P</del> NG ***** :** :*. *. * : * :***** * .***** ;***** ;*****
BCO2_human	TFQNEEGQMTCEPCPRPGNSGALKTPEAWNMS <del>E</del> CGGLCQPGEYSADGFAPCQLCALGTFQ
BCO2_mouse	TFQNEEGQVTCEPCPR <del>P</del> ENL <del>G</del> SLKISEAWNVS <del>D</del> CGGLCQPGEYSANGFAPCQLCALGTFQ ***** :***** * * : * .***** ;***** ;***** ;*****
BCO2_human	PEAGR <del>T</del> SCFPCGGGLATKHOGATS <del>F</del> QDCETRVQCS <del>P</del> GHFYNTTHRCIRC <del>P</del> VGTYQPEFG
BCO2_mouse	PDVGRTSCLSCGGGLPTKHLGATS <del>F</del> QDCETRVQCS <del>P</del> GHFYNTTHRCIRCPLGTYQPEFG *: .***** ;***** . *** ***** ;***** ;***** ;*****
BCO2_human	KNNCVSCP <del>G</del> NTTD <del>F</del> DGSTNITQCKNRR <del>C</del> GGELGDFTGYIESPNYPGN <del>P</del> ANTECTWTIN
BCO2_mouse	KNNCVSCP <del>G</del> NTTD <del>F</del> DGSTNITQCKNRR <del>C</del> GGELGDFTGYIESPNYPGN <del>P</del> ANSECTWTIN ***** ;***** ;***** ;***** ;***** ;*****
BCO2_human	PPP <del>K</del> RRI <del>I</del> IVVPEIFLPIEDDCG <del>D</del> YLVMRKT <del>S</del> NSNV <del>T</del> TYETCQTYERPIAF <del>T</del> SRSKKLW
BCO2_mouse	PPP <del>K</del> RRI <del>I</del> IVVPEIFLPIEDDCG <del>D</del> YLVMRKT <del>S</del> NSNV <del>T</del> TYETCQTYERPIAF <del>T</del> SRSKKLW ***** ;***** ;***** ;***** ;***** ;*****

BCO2\_human  
BCO2\_mouse

IQFKSNEGNSARGFQVPYVTYDEDYQELIEDIVRDGRLYASENHQEILDKKLIKALFDV  
IQFKSNEGNSARGFQVPYVTYDEDYQELIEDIVRDGRLYASENHQEILDKKLIKALFDV  
\*\*\*\*\*

BCO2\_human  
BCO2\_mouse

LAHPQNYFKYTAQESREMFPRTSFIRLLRSKVSRLPYK  
LAHPQNYFKYTAQESREMFPRTSFIRLLRSKVSRLPYK  
\*\*\*\*\*

## FIGURE 4B